2014 Catalog

EKON
Going green

Total Energy Save System

Home, Office & Building

www.ekonhome.com

Simply Smart

EKON Manufacturing Inc.

Global Excellence in Affordable Control Systems

EKON Manufacturing Inc. is one of the world's leading manufacturers of advanced control and automation systems, innovating technology and reinventing the way people live and work. Offering integrated solutions to control lighting, motors, audio, video and environmental systems.
EKON' streamline technology improving the quality of life for people in corporate boardrooms, hotels, buildings, offices and in their homes.

Since 1999, EKON Inc. has stood as one of the most trusted and reputable Intelligent Home & Building system provider, serving the worldwide market. We at EKON pride ourselves in offering high quality products and total solution for our customers.

EKON's products are sold all over Europe and the Middle East from our Asian sales office in Shanghai, China. Our products are installed via our distributor network in major hotels, office buildings, apartment complexes and 1000's of villas globally.

Ekon's products are intended to provide simple, complete control of electronic and mechanical devices. From one of the touch screen displays you are capable of controlling audio and video equipment, lights, heating and air conditioning, fire places, curtains and speakers throughout the property or individual room. EKON's control systems can be used to control other brands of equipment by IR signaling, contact closures or RS232/RS458 serial communications.

The processor range includes devices with Ethernet interfaces to allow remote control using Internet Control via a PC web browser.

With the world's leading advanced control systems as our foundation, EKON addresses the needs of facility managers and IT directors seeking to monitor and manage a variety of technologies over a single network. Whether it's a single room or the entire building, across a campus or a global network, EKON solutions centralize control of audio and video devices, security cameras, lighting and HVAC.

EKON has evolved far beyond the touchpanel and control system, becoming the definitive source for centrally and globally controlling, managing and presenting information. Control and automate all devices from an intuitive easy-to-use touchpanel or wireless touch screen remote. Let EKON take control of the technology so you can focus on your business.

Catalog

System Introduction

Total Solutions for:

- Villa and Apartments
- Residential Complex
- Conference Rooms

Products Information

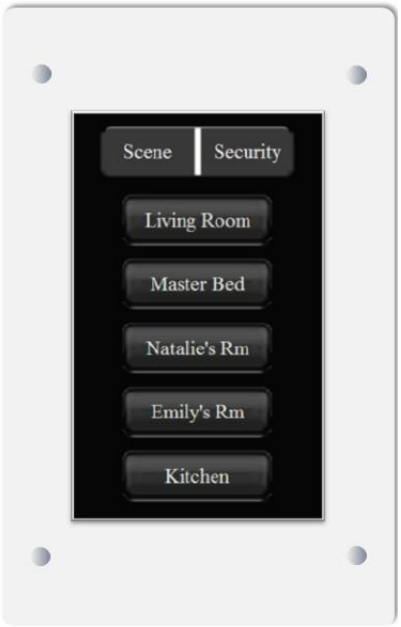
System Introduction

Touch Screen Controllers

Wall or Table mount 10” touch screen master controller

Smart Phone 7” touch screen controller

Wall or Table mount 15”-21” touch screen master controller



Wall mount 10” touch screen master controller

Wireless 9” touch screen

10” Box Master Controller

We Keep it Simple

+

=

Total Control Solution

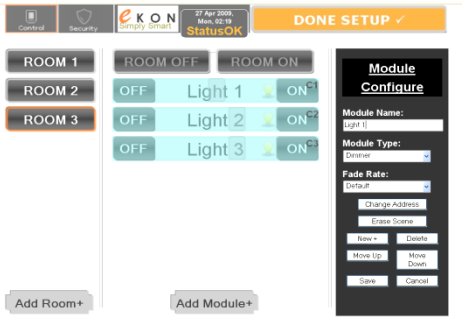
Simple Installation

Plug controller to Power and Router

PlugandPlay

Connect wall switch to Live, Neutral and Load

Simple Setup (no programming)



Press setup button on screen and simply Add Rooms, Modules and Scenes in any name and any configuration

Simple End-User Operation

1) Trigger Scenes

2) Control Lights…

3) Select Room

4) Setup Timers

5) Set Off Security

6) Enjoy & Save $

We Save you Money!

TOTAL Power Cost Meter

- Online Electric Cost **$\hour**
- Auto 'Peak' \ 'Off-Peak' set
- Green = average
  Red > average

SINGLE Device Power Cost

Show $/hour **Savings** of powering Off any device

Show $/hour **Spending** of powering On any Device

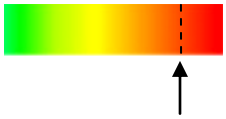
GROUP Power Cost Meter

Power Off or On a group of devices (Room On, Trigger a Scene, All House On\Off, etc.) will show the Total Cost $ Save\Spent for this operation

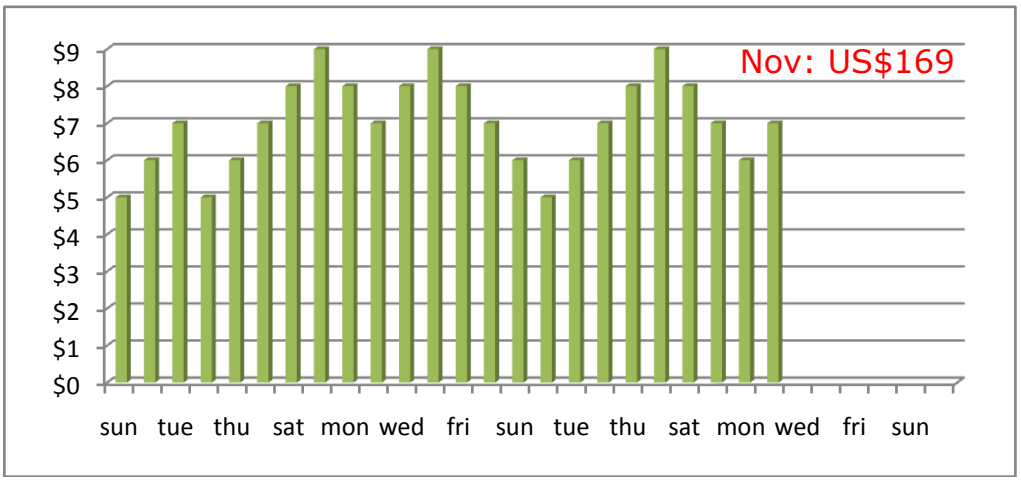
Note: all power meter functions are OPTIONAL add-on to controller

Auto Power Off – Energy Saver

Automatically triggers OFF selected devices when power goes above average

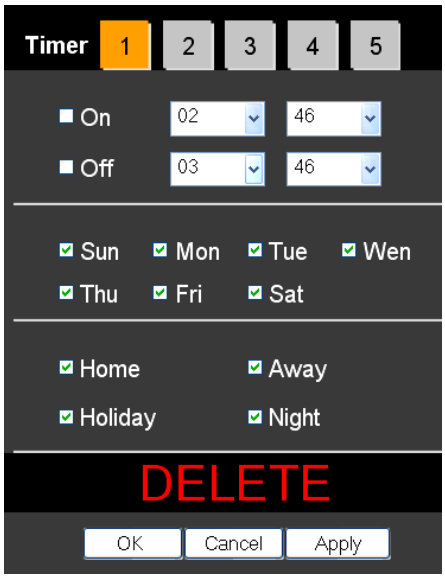


Power Information On Screen



Show on screen the Daily Cost and up-to-date monthly bill

Smart Timer



- Each Module and Each Scene has 5 Smart Weekly Timers
- Timers have 4 conditions:
  - ✓ Home mode = regular mode
  - ✓ Away mode = alarm active
  - ✓ Night mode = night alarm
  - ✓ Holiday mode = 24hrs in away

The timer will be activated only if anyone of the selected condition\s is met

Internet - Remote Control

- Control system remotely from anywhere in the world
- Local wireless Control
- Secure password connection

Status Request

2-Way communication indicates if light is On or Off

No indication = Light OFF

Orange indication = Light ON

Wireless iPhone and iPad

Reliable 1000 meters signal (through walls)

- Signal goes through walls
- 1000 meters (3300 ft) signal range from controller to modules
- Avoid unhealthy RF radiation
- 99.9% reliable

Backup

- In the rare event of system breakdown, the switches will continue to functions manually
- Master controller has backup battery to save all settings

RS232 Interface (optional)

Control RS232 devices from Controller (send HEX or ASCII commands)

GUI in any language

Setup Name of Rooms, Lights, Motors, Scenes, etc. in any language.

Fluorescent and LED Dimmer (0-10VDC)

Weather Sensor

Plug & Play (no need wires to controller)

System Triggers 'OPEN Scene' (i.e. Open all blinds and turn Off few Lights) when anyone of the bellow conditions is met:

Sun ↓ or Wind ↑ or Rain ↑ VS Set-Point

System Triggers 'CLOSE Scene' (i.e. Close all blinds and turn On few Lights) when anyone of the bellow conditions is met:

Sun ↑ or Wind ↓ or Rain ↓ VS Set-Point

Set Point is adjustable by user

HVAC control

Control Air Condition and Floor Heating via touch screen

GSM control

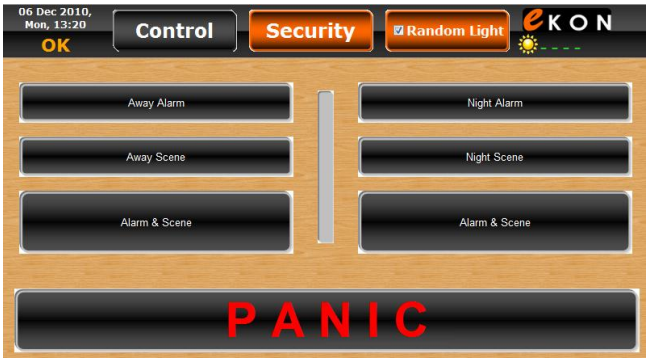
Turn On or Off the Air condition and Heater by sending SMS from anywhere in the world

Security

CCTV Interface

System can interface with IP cameras and DVRs via Ethernet:

Alarm Interface



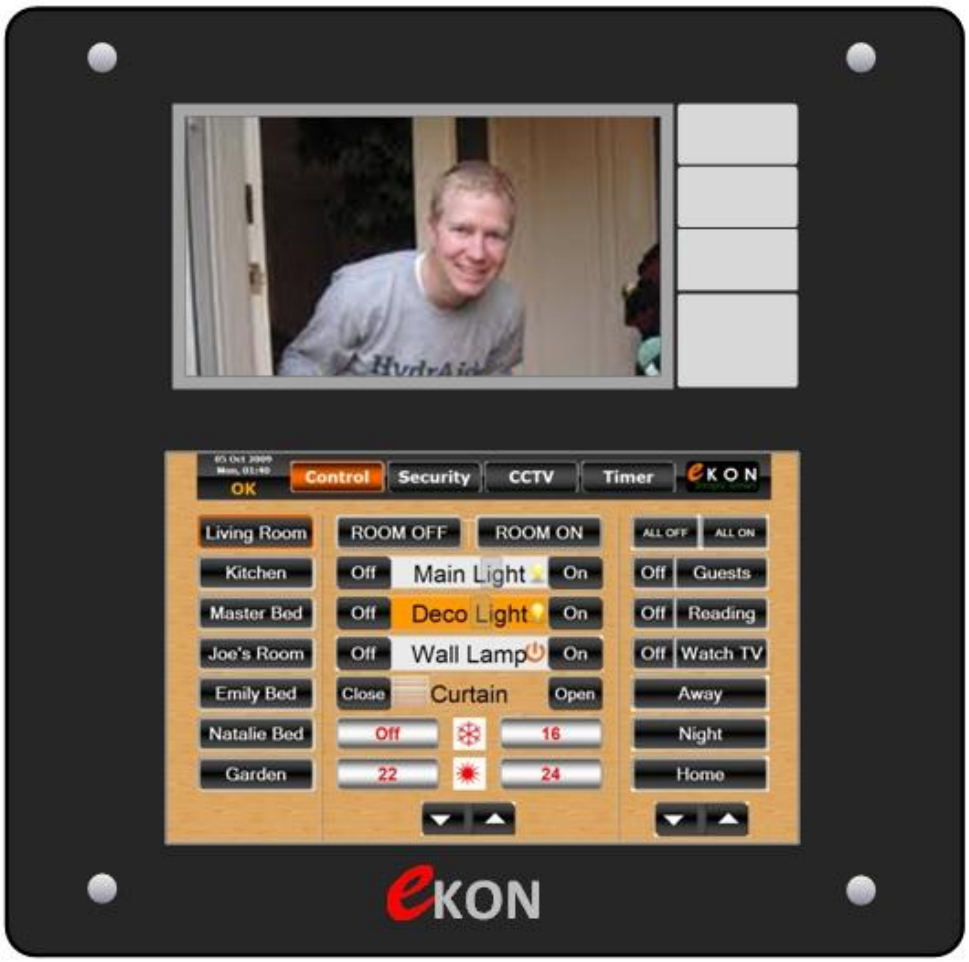
Set-off alarm in Away or Night mode with\out scene.

Random Light are triggered during night time in Away mode

Deactivate alarm on keyboard with\out Scene.

Panic button flashes all lights in the property and set the siren

Video Intercom



Villa (single) outdoor unit

Multi Apartment outdoor unit

Features:

- Hands-free video intercom
- 7 inch color TFT display
- Monitoring, calling, alarming, unlocking,
- Intercommunication of muiti-parties
- TCP/IP Ethernet RJ45 interface
- Outdoor camera
- Wide View Angle
- Infrared night vision
- CCD Camera
- Waterproof

Features and Advantages

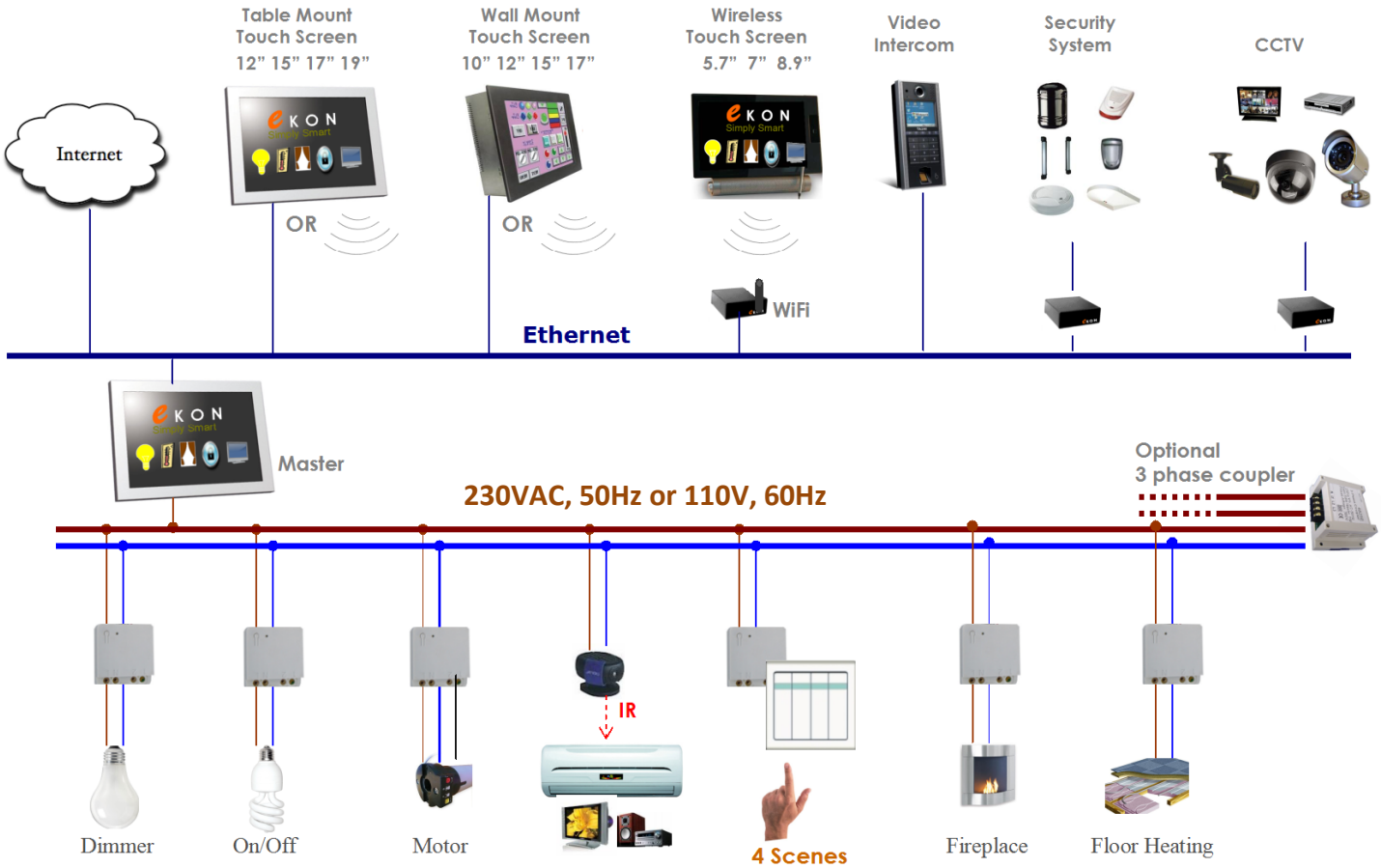
- ☑ Total system control – Control Lights, Air Conditions, Audio Video devices, Close Circuit TV, Alarm system, etc.
- ☑ Touch Screen Control and Monitoring – Control and monitor (2 way) the home over an easy to use touch screen with interactive GUI (Graphical User Interface) in any Language.
- ☑ Flexible Grouping (Scenes) – Modules can be programmed into any number of groups (from 2 modules up to entire system control by one press of a button). This grouping can be changed within minutes at any time.
- ☑ Optional Local Control – Allow user manual control by any design wall switch to blend with the house deco
- ☑ Timer control – Any module or scene in the system can be activated or turned off by weekly timer with predefined conditions
- ☑ Energy Save – Ensure unused electric loads always turne

eKON Simply Smart

- ☑ Alarm Interface – Security system works jointly as one system in 2 way configuration
- ☑ Close Circuit TV interface – Cameras can be viewed, monitored and recorded from EKON's touch screens
- ☑ Backup – In the unusual event of system break down, all modules continue working manually
- ☑ Internet Control – Control and monitor the system from remote location in where in the world
- ☑ Mobile Phone Control – control and monitor the system from remote location via iPhone (and other cell phones)
- ☑ Simple System Design - EKON system is simply designed within any blue prints
- ☑ Simple Wiring – Wiring layout is similar to conventional electricity
- ☑ Simple Installation – System Installation is similar to conventional electricity
- ☑ GUI in all languages – user interface is very friendly and can be setup in any language

EKON

System Layout of Villas and Apartments



EKON system is a Total Smart Home Solution to control all the electrical devices in the house. The system is Plug & Play system that works out of the box and it mainly consist of 3 basic elements:

1. Control Panels

These comprise the build-in controller units which can be wired or wireless and include the following products:

- ☑ Wall Mount Touch Screens
- ☑ Table Mount Touch Screens
- ☑ Wireless Touch Screens

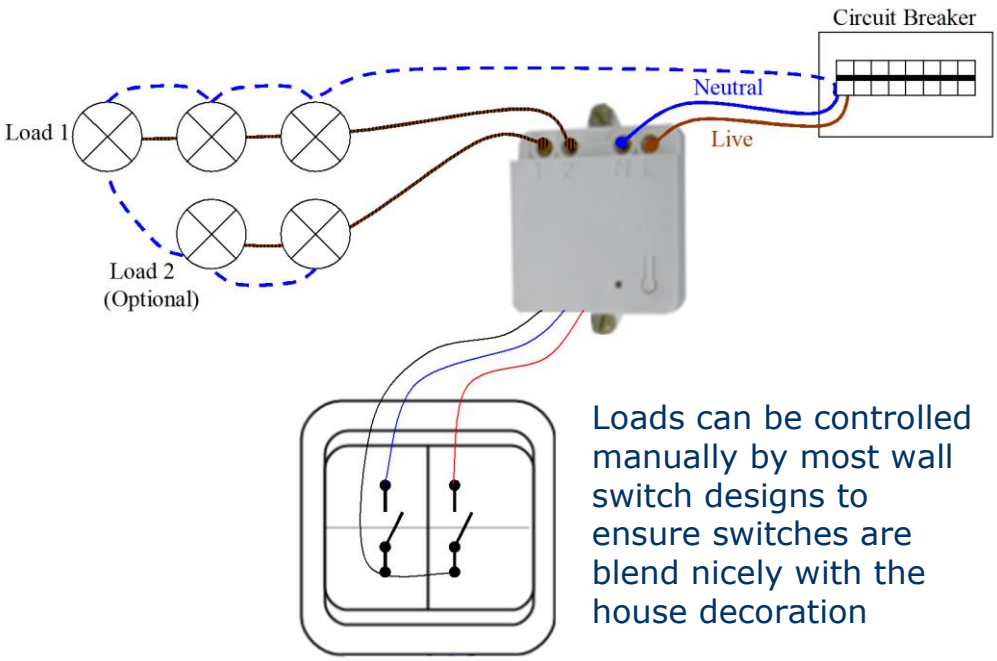
Each system has 1 master controller and up to 16 slaves touch screens remotes in any combination. Both master and slave are Plug & Play technology:

Power 110-230VAC
and Ethernet (RJ45).
Optional RS232 \ RS485 to Master

2. Switching Devices

Switching devices control lights, air conditions, motors, audio and video and others. These include dimmers, relay module, Infrared Transmitters, etc.

EKON's controllers communicate with the switching devices in 2 main technologies (PLC and RF) in which both methods does not require adding control wires ensuring wiring and installation is very simple and can be completed in relatively short time.



Loads can be controlled manually by most wall switch designs to ensure switches are blend nicely with the house decoration

3. Security Device

Close Circuit Cameras, Access Control and Alarm System are integrated with EKON's system via RS232 \ RS485 or TCP-IP.

Control and monitor alarm system and CCTV via touch screen panel

Residential Complex

Features and Advantages

☑ Communicate with Neighbors – Talk with neighbors in the apartment complex at no extra cost, include video streaming so you can see your neighbors while you talk, hands free.

☑ Communicate with Doorman – Call doorman for service, hands free

☑ Order Services – Call supermarket to order groceries, Call hairdresser to make appointment, etc.

☑ Updated Information – Receive News, Weather and other updated on-line

☑ Security 24\7 – On-Line connection to monitoring station in case of break in, fire, health condition, etc. while you are in the house or away.

☑ Watch Public CCTV – Each apartment in the complex can watch on the touch screen panel the public areas

System Layout of Apartment Complex

Doorman
Apartment Complex Control Center

Service Providers
Supermarket, Hairdresser, etc.

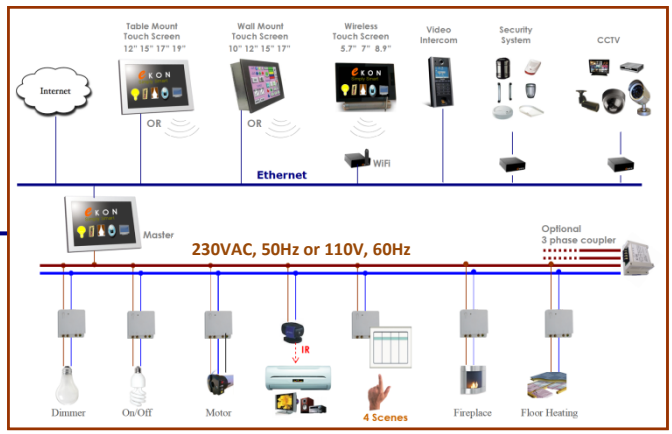
Security Center
Monitoring station, Police, Ambulance

Entrance Intercom
Audio Video outdoor touch screen

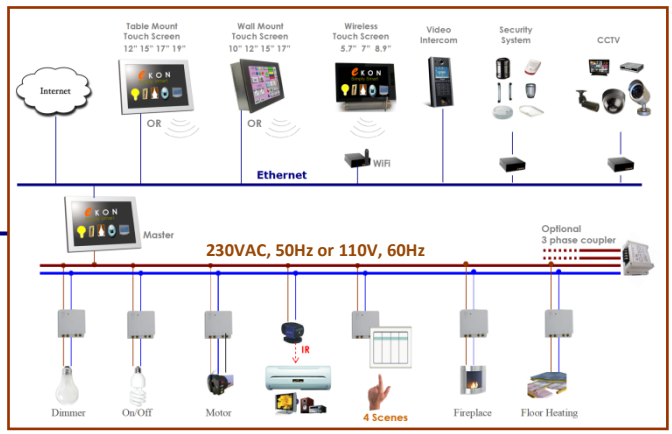
DVR & CCTV

Total Apartment control

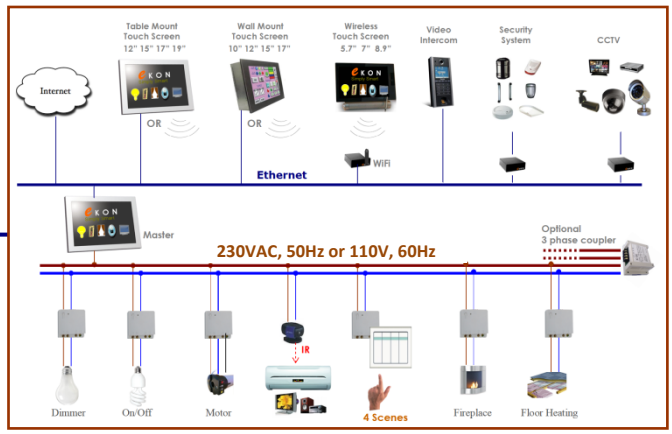
As described above, control lights, motors, audio, video and others via touch screen include remote internet control, mobile phone control, timers, scenarios and more.



Apartment 1



Apartment 2



Apartment 3...

○
○
○

Apartment 2560 (max.)

TCP-IP

Main Server

Features of Villa & Apartment

Digital Lighting Control

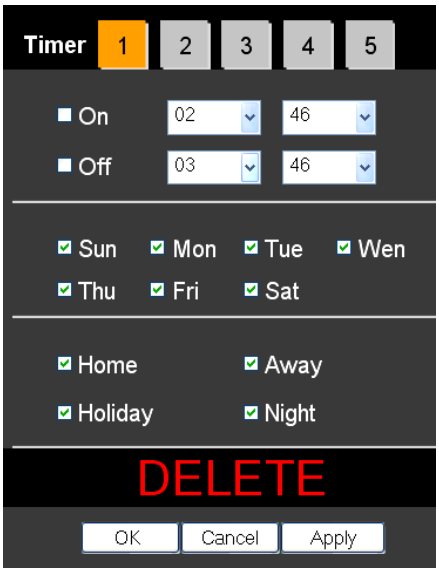
Lighting controls, including dimming and switching, can be used to increase flexibility and security, set a mood, save energy and extend the life of your light bulbs. They are one of the fastest-growing home technologies because they offer a measurable impact on quality of life and home value. They're not gadgets. They're lifestyle enhancements.

Good residential lighting design typically involves layering ambient, accent and task lighting to create interesting contrasts and establish focal points, or points of interest where attention is focused. By simply dimming the lights, the owner can affect visual comfort, change contrasts, create mood and alter perception of the space. When using a preset scene control system, different lighting scenes can be created and recalled whenever desired with the touch of a button

Motorized Control System

Motorized Blinds and curtains can be controlled via EKON system. They can save energy by shading the rooms from direct sunlight and so ensure the air condition works less time then usual.
Moreover, closing all blinds before leaving the house will secure the house from burglar’s entry. EKON’s system will ensure all blinds are closed automatically when leaving the house, including garage doors.

Smart Timer



Each device connected to EKON's system (such as lights, motors, Audio, Video, etc) can be turned on and off by 5 separated timers. Similar to control a single device, user can also activate a Scenario at a certain time at certain conditions \ modes (Home Mode, Away Mode, Night Mode and Holiday Mode).

Internet Control

All the sophisticated controls mention above here can also be done from outside of the house. Just imagine, sitting at your office, making sure the alarm system is activated, all lights and air conditions are turned off and many more.

Another common feature is before leaving the office, turning on the air condition \ heater to arrive to very comfortable house.

Mobile Phone Control

EKON also has special user interface for mobile phones to be able to simply control and monitor all the devices in the house, including scenarios away from home, all over the internet

Random Light – Security

Leaving a dark house at night is welcome invitation to burglars. EKON system ensure that when the house is left empty at night, there will be lights around the house to go on and off randomly to imitate someone is staying in the house and so will scare off burglars.

Scenarios – everything by one press of a button

Scenario means controlling more than 1 device at the same time. There are many types of scenarios but the feature really depends on the user. The more common scenarios are Leaving the House, Arriving Home, Go to Sleep, Waking Up, Guests Scenario, and more.

Conference Rooms

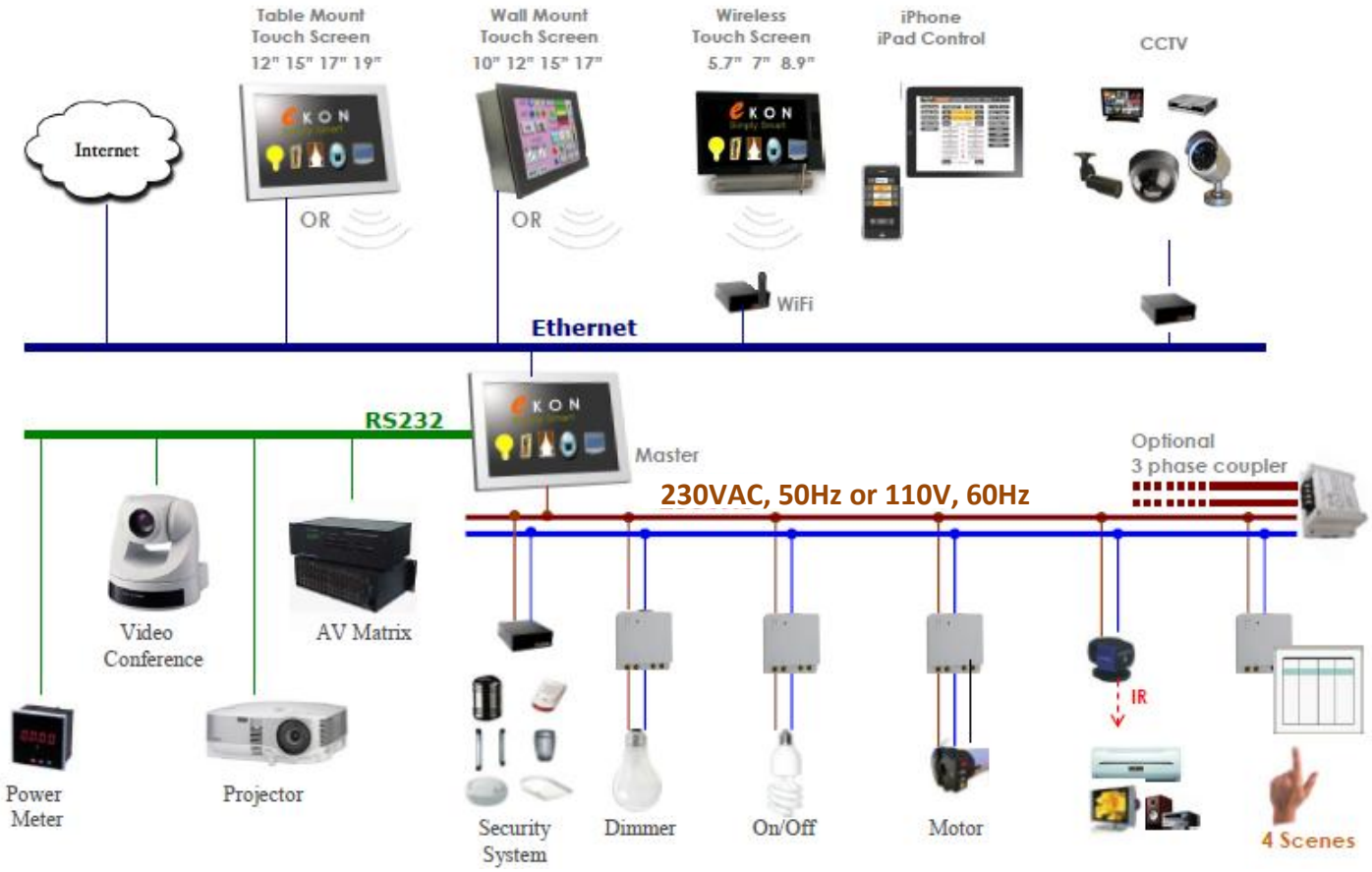
A Conference Room filled with Convenience, Comfort & Style

From easy, one-touch access to your conference room multimedia, to controlling your lights, blinds, climate, security and audio video – EKON has a simple, elegant way to control it all.
If you want the basics or the elaborate, EKON controls provide you with wonderful, newfound freedom to move about your office with one-touch access to what you want – where and when you want it.
Enjoy the widest, award-winning variety of attractive office controls that can fit your lifestyle and budget. From simple keypads that control your utilities, to touch screens, and up to wireless Touchpad and our family of EKON Touch Panels, you can benefit from a stylish, intuitive interface that's *designed just for you.*

- Adjust light level of all loads at one touch of a button
- Set presentation mood with audio, video and lighting
- Set your matrix system (via RS232 and IR)
- Control Video Conference and Microphone system
- And beyond…

With EKON, your entire office is now at your fingertips

System Layout of Conference Room



Features:

- ☑ The World's simplest system to Install, Setup and Use
- ☑ EKON's Plug & Play Technology (just Power and Ethernet)
- ☑ Table Mount or Wall mount 10", 12", 15", 17", 19" touch screen with Black or White color frame (special colors available)
- ☑ Wireless touch screen control
- ☑ Direct User Setup on touch screen (no need PC)
- ☑ Internet Control for external operation
- ☑ Control system with PDA and most Mobile Phones
- ☑ User Interface in any Language

Products

Master Controller

EKON's master controllers are Plug & Play units that include all the required hardware and software to control residential and commercial properties.

	Wall\Table Mount touch screen	Wall\Table Mount touch screen	Residential Controller	Commercial Floor Controller
Picture				
Ethernet	10\100Mbps high speed Ethernet network			
Wireless	Optional			
Power Supply	110VAC (60Hz) OR 220VAC (50Hz)		110-220VAC, 50-60Hz	
Screen Size	10	15", 17", 19"	N/A	N/A
Control Communication	EKON PLC			
Plug & Play technology	✓	✓	✓	✓
RS485	Optional 2 ports			
RS232	Optional 2, 4, 7 or 14 ports. Each control 224 commands (expandable)			
RS232 protocol	ASCII and HEX (in any combination)			
Language	System in English, Chinese and German. User interface in all languages.			
Number of Loads	224 loads (dimmer, on\off, curtains) per Master			
Number of Scenes	32 scenes per master (each scene can control all loads)			
Master control buttons	Zone On and Off, All loads On and Off			
EKON PLC reliability	High resistance to power line noise – 99.8% reliable			
EKON PLC Speed	Signal Respond within 0.4 seconds			
EKON PLC Distance	At least 1000 meters from controller			
EKON PLC communication	Receive Status Request - 2 way communication			
Number of Timers	5 Weekly timers for each Module and for each Scene			
Timer Conditions	Away mode, Night mode, Holiday mode and Home mode			
Internet Control	✓	✓	✓	Optional
iPhone control	✓	✓	✓	Optional
Alarm Interface	Via RS232 (2 way communication)			
Security Lighting	Random lights in Away Mode during night time			
CCTV Interface	Via Ethernet (TCP-IP)			
Frame Colors	Black or White (other colors are available with MOQ)			
VGA	XGI Z9S with 32MB DDR2		N/A	N/A
Contrast Ratio	450:1		N/A	N/A
Color Resolution	16.2 M		N/A	N/A
Brightness	250cd/m^2		N/A	N/A
Touch screen	Five-wire Resistive Touch Screen		N/A	N/A
LCD MTBF	50,000 hours		N/A	N/A
Back light MTBF	25,000 hours		N/A	N/A
Ordering Information	E10-CPU10W	E10-CPUXXW XX = screen size	E10-CPU-LCD	E10-CPU-C

Slave Controller

These Touch Panels sets a new standard in touch-screen technology, with rich color graphics, an easy-to-navigate interface and superior performance. EKON's touch panels can control all the electrical devices such as lights, air condition, and motorized blinds from one central location. It is the perfect solution to the office giving the user instant control in the same room and in remote rooms for electrical devices located throughout commercial facilities.

	Table Mount touch screen	**Wall\Table Mount touch screen**	**Wireless Controller**
Picture			
Network	10\100Mbps high speed Ethernet network		Wireless
Wireless	Optional		WiFi 802.11b/g
Power Supply	110VAC (60Hz) OR 220VAC (50Hz)		110-220VAC, 50-60Hz
Screen Size	15, 17, 19", 21"	15, 17", 19", 21	8.9"WVGA wide-screen
Control Communication	TCP-IP		WiFi
Plug & Play technology	✓	✓	✓
Frame Colors	Black (other colors are available with MOQ)		Black (white special order)
Language	System in English, Chinese and German. User interface in all languages.		
Touch screen	Five-wire Resistive Touch Screen		
VGA	XGI Z9S with 32MB DDR2		N/A
Contrast Ratio	450:1		N/A
Color Resolution	16.2 M		N/A
Brightness	250cd/m^2		N/A
LCD MTBF	50,000 hours		N/A
Back light MTBF	25,000 hours		N/A
Battery	N/A		5400MAH (up to 4 working hours)
Camera (intercom)	Optional for Intercom		Built-in 1.3M
Speaker and Microphone	Optional for Intercom		Built-in for Intercom
Outdoor (waterproof)	Optional for Intercom		N/A
Ordering Information	E10-TSXXT XX = screen size	E10-TSXXW XX = screen size	E10-TS9-W

Server

EKON's Servers are used in Apartment Complex, Building Control and Hotel central room control. The type, size and specification of these servers depend on the project size, its features and user requirement.

Switching Devices (Micro Modules)

Micro modules are used to control Lighting, Motorized Curtains & Screens, and other.
These can be installed behind the regular wall switch for manual control or alternatively in the ceiling next to controlled load. These modules have small dimension so it can fit in most wall switch boxes. There are few types of Micro modules to choose from, depend on the load type to be controlled and the current.

	Dimmer 1 load	Dimmer 2 load	On\Off 1 load	On\Off 2 loads	Motor 230VAC	Motor 12-24vdc	DIN On\Off 4 loads	DIN Dimmer 2x1000W	On\Off 1x 24A
Picture									
Control Load	Incandescent lamp, Halogen, Low volt (only magnetic transformer)		Incandescent, CFL, florescent, Halogen, motors, heaters, air conditions, etc.		Motors (up\down)	Low voltage motors (up\down	Halogen, motors, heaters, air conditions	Incandescent lamp, Halogen, Low volt	Almost All Loads
Current	300W	Total 400W	8Amp for Resistive 5Amp for Low Volt 1.5A for Florescent (Amp per Channel)		90 Watt motor	Dry Contact – 90 Watt	4 X 8Amp	2 x 1000 Watt	24 Amp
Electronic addressing	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fade Rate	✓	✓						✓	
2 Way communication	Status request								
Behind Switch	✓	✓	✓	✓	✓	✓			
Switch Type	Pulse or Toggle	Pulse or Toggle	Toggle	Toggle	Toggle	Pulse x 2	Pulse or Toggle	Pulse or Toggle	Toggle
Last dim memory	✓	✓						✓	
Voltage	220-240VAC at 50Hz OR 110VAC at 60Hz								
Neutral	✓	✓	✓	✓	✓	✓	✓	✓	✓
PLC transmit speed	<=1.5 second								
False Rejection Ratio (FRR)	<=0.1%								
False Accept Ratio (FAR)	<=0.01%								
Operating temperature	0-45°c								
Operating Humidity	20-80%								
Dimension	43 x 47 x 19mm			45 x 47 x 19mm			11.5cm x 9.6cm x 4cm (H)		7x7x10cm
Wall Box depth	Minimum 35mm								
Scenes memory	16 Scenes per module								
Ordering Information	E2263	E2264	E2267	E2268	E3160	E3160L	E2268HX	E2264HX	E2267H

Crystal wall switches

	Dimmer 1 load	Dimmer 2 load	On\Off 1 load	On\Off 2 loads	Motor 230VAC
Picture					
Specification	Same as Micro Module				
Order info.	E2220	E2221	E2224	E2225	E3160E

IR Module

Control Audio Video with Infra Red controller (IR).

Cat No. E3011

Features:

- ☑ Control up to 32 IR commands
- ☑ Communicate with controller over power line (no control wires)
- ☑ Easy setup (just plug to power)
- ☑ Electronic Addressing (easy setup)

3 Phase Coupler

Repeat the power line signal in all 3 phases

Cat No. E4825

Features:

- ☑ Only use for 3 Phase installation
- ☑ Low power consumption: ≤ 1W
- ☑ Installed in electric board
- ☑ Size: 115mm(L) x 93mm(W) x40mm(H)

4 Scene Control (Digital Inputs)

- ☑ Activate up to 4 scenes by one press of a button
- ☑ Communicate with controller over power line (no control wires)
- ☑ Electronic Addressing (easy setup)
- ☑ Easy installation (only power)
- ☑ Connect sensors via Dry Contact (Rain, wind, Light sensors)
- ☑ Selection between 'Behind the Switch' and 'Crystal Wall Switch'

Cat No. E2269

OR

Cat No. E4206

Power Line Absorber

Supress noise on the power line

Cat No. E4820

E4821 (for 3 phases)

Demo Case

Mobile demo case includes the following:

- ☑ Master Controller (plug and play)
- ☑ 9 inch wireless touch screen
- ☑ Wireless router
- ☑ Dimmer micro module 2 loads
- ☑ On\Off micro module 2 loads

Cat No. E10-DC

Alarm System

- ☑ 16 Zones Alarm System
- ☑ Plug and Play – communicate with controller over power line
- ☑ Away and Night mode
- ☑ Operated from Touch Screen Controller
- ☑ Backup Keyboard

Weather Sensor

- ☑ Rain, Wind and Light Sensor
- ☑ Trigger 2 scenes for open and close
- ☑ User can change set point for each sensor separately
- ☑ Plug and Play – no need extra wires to controller

HVAC thermostat

- ☑ Design for Air Condition and Floor heating
- ☑ Plug and Play – no need extra wires to controller
- ☑ Option remote control add-on
- ☑ Can control temperature preset conditions from touch screen

GSM Controller

- ☑ Control 3 Scenes by sending SMS
- ☑ Plug and Play
- ☑ Specially Designed to control HVAC and Heater remotely

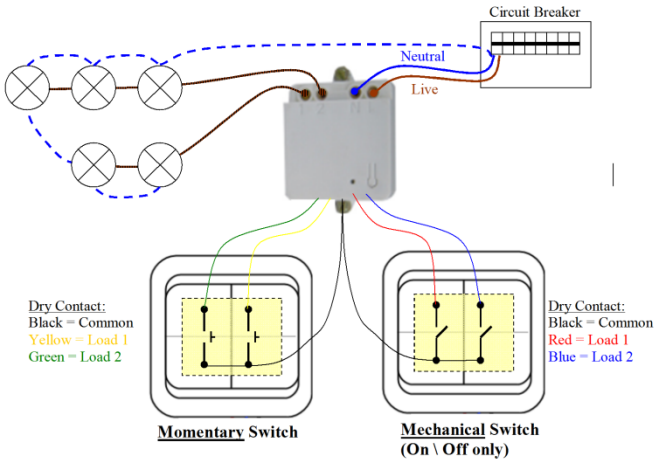
Fluorescent and LED Dimmer

- ☑ 0 to 10 volt control
- ☑ Can dim Fluorescent and LED
- ☑ For T5 Fluorescent Lamps Dimming Solution : Work with HEP T5 Transformer (SD214-35)
- ☑ For 12V LED Dimming Solution : Work with OSRAM Optotronic

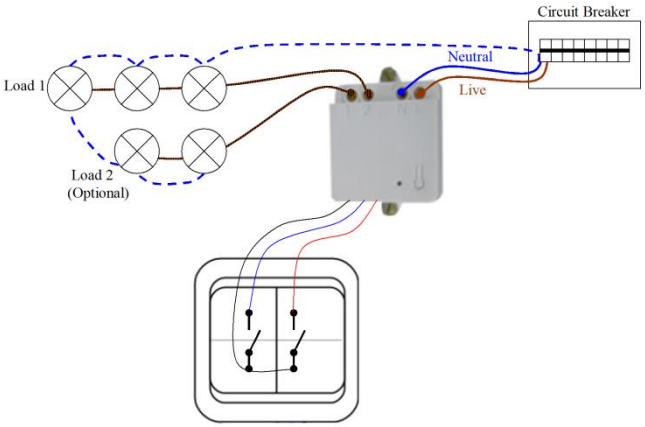
Quick Install Guide

Master and Slave installation

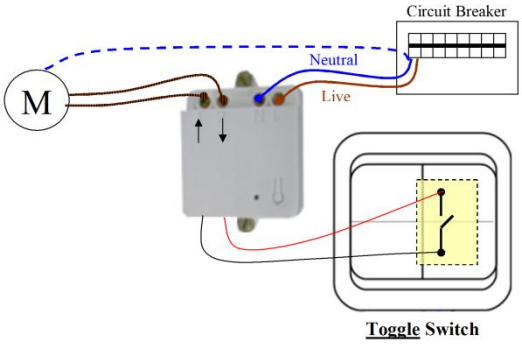
Dimmer installation



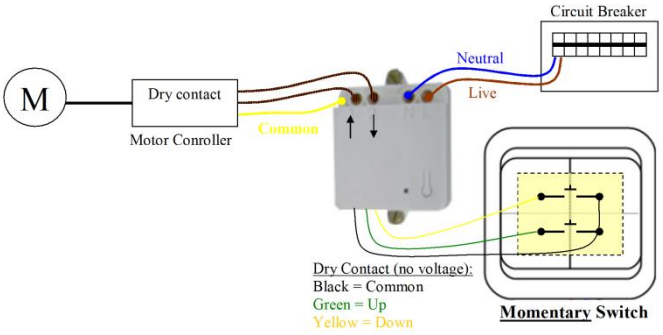
On\Off module installation



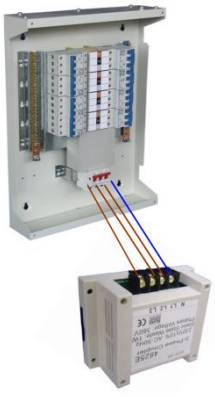
Motor Control (110VAC - 230VAC)



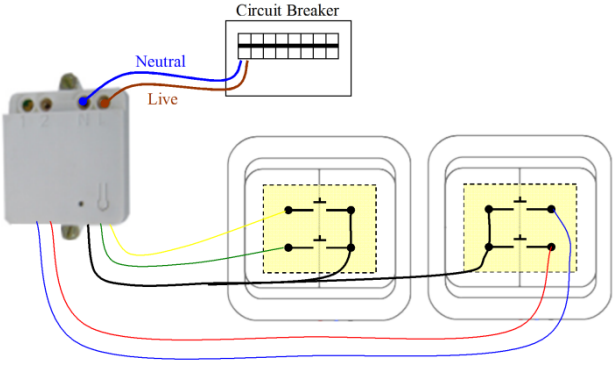
Motor Control (low voltage)



3 Phase installation



4 Scenes Installation (Digital Inputs)



EKON Technology

EKON – PLC

Signal between touch panels and wall switches carries on the existing power line in an area of up to 10,000m^2 with reliability of 99.8% and speed of 0.4 second.

Scenes commands are transmitted at once to all modules.

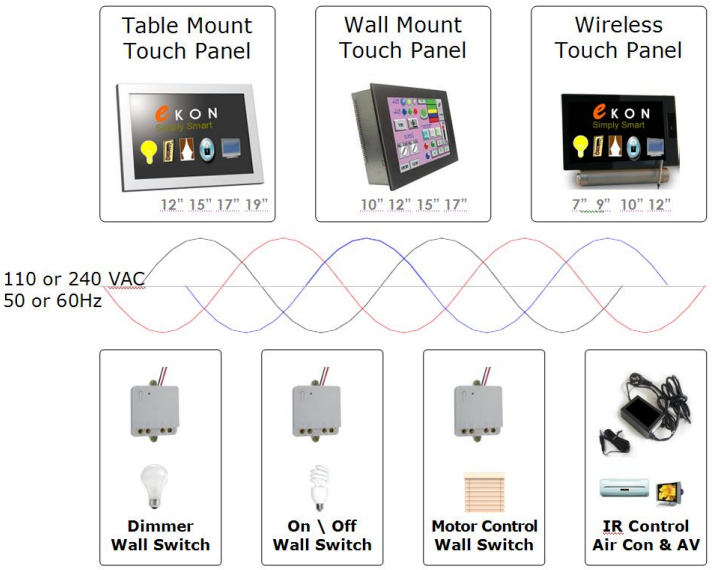
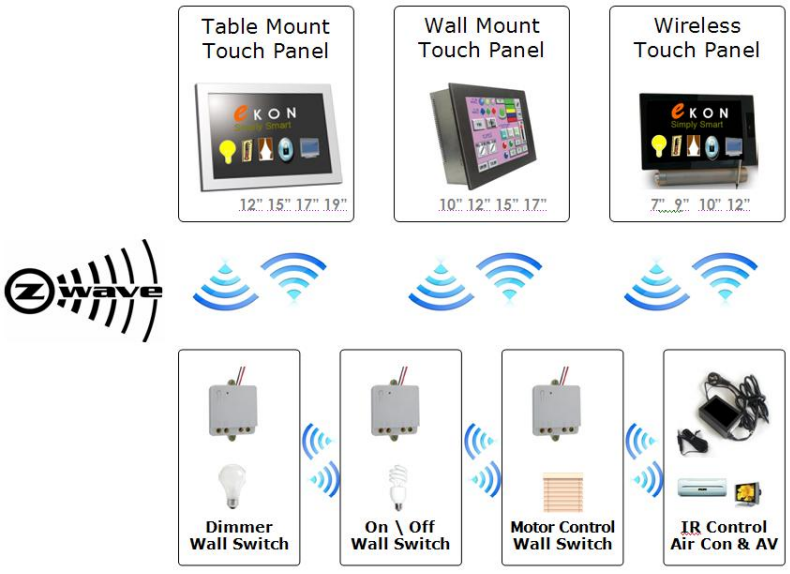


Table Mount Touch Panel
12" 15" 17" 19"
Wall Mount Touch Panel
10" 12" 15" 17"
Wireless Touch Panel
7" 9" 10" 12"
110 or 240 VAC
50 or 60Hz
Dimmer Wall Switch
On \ Off Wall Switch
Motor Control Wall Switch
IR Control Air Con & AV

Z-Wave – Mesh RF Technology

Signal between touch panels and wall switches passes wirelessly by RF (EU 868MHz and US 908MHz) in 2-way communication.

RF Signal is also transient between the switches in Mesh configuration to ensure large and reliable RF signal coverage.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On \ Off Wall Switch
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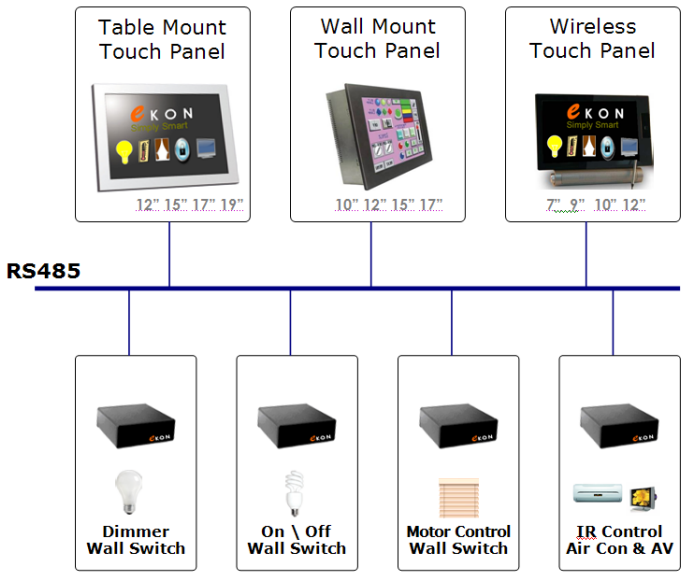
IR Control Air Con & AV

EKON Bus

Signal between touch panels and wall switches carries by RS485 using EKON's protocol (2-way communication).

Scenes commands are transmitted at once to all modules.



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